IN THE CLAIMS:

1. (Original) A process for depositing pure platinum on a substrate comprising:
applying Pt(acetylacetonate)$_2$ onto a substrate;
wrapping at least a portion of the substrate with a metal foil; and
heating the substrate and the foil, wherein the Pt(acetylacetonate)$_2$ decomposes to deposit pure platinum on the substrate.

2. (Original) The process of claim 1, wherein a solution of Pt(acetylacetonate)$_2$ and a solvent selected from the group consisting of acetone, ethanol, methanol, methyl ethyl ketone and xylene is applied onto the substrate.

3. (Original) The process of claim 2, wherein the solution is a saturated solution.

4. (Original) The process of claim 1, wherein Pt(acetylacetonate)$_2$ in powder form is deposited onto the substrate.

5. (Original) The process of claim 1, wherein the substrate and foil are heated to about 300°C at a rate of about 10-25°C per minute and then held at about 300°C for about 1 hour.

6. (Original) The process of claim 1, wherein the substrate and foil are heated to a temperature between about 250°C and about 350°C and held at the temperature for between about ½ hour and about 24 hours.

7. (Original) The process of claim 6, wherein the temperature is between about 290°C and about 310°C, and is held for between about ½ hour and about 5 hours.

8. (Original) The process of claim 1, wherein the pure platinum coating deposited onto the substrate has a thickness between about .01 microns and about 10 microns.

9. (Original) The process of claim 8, wherein the thickness is between about .1 microns and about .5 microns.

10. (Original) The process of claim 1, wherein a coating is applied over the pure platinum deposited on the substrate.

11. (Original) The process of claim 1, wherein the substrate is a gas turbine engine component comprising a base metal.

12. (Original) The process of claim 11, wherein the substrate is selected from the group consisting of a nickel-based alloy, a cobalt-based alloy, and an iron-based alloy.

13. (Original) The process of claim 11, wherein a pure platinum coating is deposited onto a coating previously applied to the base metal.

14. (Original) The process of claim 11, wherein the substrate is selected from the group consisting of a seal, flap, vane, blade, combustor splash plate and flameholder.

15. (Original) The process of claim 1, wherein the substrate is selected from the group consisting of a metal, metal alloy, and non-metal material.

16. (Canceled)

17. (Currently Amended) The process of claim 1 ~~16~~, wherein the pure platinum is employed as part of a coating selected from the group consisting of a heat rejection mirror coating, a coke barrier coating and a calcium magnesium aluminum silicon barrier coating.

18. (Original) The process of claim 1, wherein the solution is sprayed onto the substrate.

19. (Original) The process of claim 1, wherein the entire substrate is wrapped in the foil.

20. (Original) The process of claim 1, wherein the foil is aluminum foil.

21. (Currently Amended) A process for depositing pure platinum on a substrate comprising:

applying a solution selected from the group consisting of 1) $Pt(acetylacetonate)_2$ and ethanol ~~or~~ and 2) $Pt(acetylacetonate)_2$ and acetone onto a substrate;

wrapping at least a portion of the substrate with a metal foil;

heating the substrate wrapped with the foil to about 300°C at a rate of about 10-25°C per minute and then holding at about 300°C for about 1 hour, wherein the $Pt(acetylacetonate)_2$ decomposes to deposit pure platinum on the substrate.

22. (Original) The process of claim 21, wherein the substrate is a gas turbine engine component.

23. (Original) The process of claim 21, wherein the foil is aluminum foil.

24. (Original) A process for depositing pure platinum on a substrate comprising:

applying a solution of $Pt(acetylacetonate)_2$ onto a substrate;

wrapping at least a portion of the substrate with aluminum foil; and

heating the substrate and foil, wherein the $Pt(acetylacetonate)_2$ decomposes to deposit pure platinum on the substrate.

25. (Original) The process of claim 24, wherein the substrate and the foil are heated to about 300°C at a rate of about 10-25°C per minute and then held at about 300°C for about 1 hour, wherein the $Pt(acetylacetonate)_2$ decomposes to deposit pure platinum on the substrate.

26. (Original) A process for depositing pure platinum onto a substrate comprising:

applying a platinum beta-diketonate onto the substrate;

wrapping at least a portion of the substrate with aluminum foil; and

heating the substrate and aluminum foil to about 300°C at a rate of about 10-25°C per minute and then holding at about 300°C for about 1 hour, wherein pure platinum is deposited on the substrate.

27. (Original) The process of claim 26, wherein the substrate is a gas turbine engine component.

28. (Currently Amended) A process for depositing pure platinum on a substrate

comprising:

applying Pt(acetylacetonate)$_2$ onto a substrate;

enclosing the substrate within a non-airtight container; and

heating the substrate and the non-airtight container, wherein the Pt(acetylacetonate)$_2$ decomposes to deposit a pure platinum coating on the substrate, which is a gas turbine engine component.

29. (New) The method of claim 28 wherein the pure platinum coating is selected from the group consisting of 1) a bond coating deposited on the component and having a layer of aluminum thereon and 2) a pure platinum coating deposited onto a barrier oxide coating located on the substrate, which is a base metal substrate of the gas turbine engine component.